Special Issue

Microfluidic Technology in Cancer

Message from the Guest Editors

Microfluidics now shapes oncology by making experiments and diagnostics possible at volumes and time scales that conventional platforms cannot reach. In practice, this means high-efficiency capture of circulating tumor cells and extracellular vesicles for minimally invasive genotyping; droplet and digital assays that quantify rare mutations and methylation events; tumor-on-a-chip systems that recapitulate hypoxia, shear, and stromal crosstalk; and single-cell barcoding that resolves intratumoral heterogeneity and drug-tolerance states.

This Special Issue sets the stakes for translation: sensitivity versus throughput, device standardization and interoperability, biomaterial and reagent compatibility, data integration with pathology and imaging, reproducibility across laboratories, and the regulatory evidence needed for bedside adoption. We seek contributions that move beyond proof-of-concept through means such as head-to-head benchmarks, clinically anchored studies, robust modeling of transport and mechanics, scalable manufacturing methods, and open protocols or datasets that others can reproduce.

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Message from the Editor-in-Chief

Cancers is an international online journal addressing both clinical and basic science issues related to cancer research. The journal is publishing in Open Access format, which will certainly evolve to ensure that the journal takes full advantage of the rapidly changing world of information and knowledge dissemination. It publishes high-quality clinical, translational, and basic science research on cancer prevention, initiation, progression, and treatment, as well as other related topics, particularly to capture the most seminal studies in the rapidly growing area of immunology, immunotherapy, and tumor microenvironment.

Editor-in-Chief

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